

The tadpole of this species does not appear to have been described.

FAIZ & Co.,
75, ABDUL REHMAN STREET,
BOMBAY 3,
September 24, 1954.

HUMAYUN ABDULALI

[Mr. Abdulali visited Mahabaleshwar again 31st October to 2nd November 1954 and offers the following additional notes:

'Seen in streams on Fitzgerald Ghat, and in Blue Valley nullah. They were more common at Dhobi's Waterfall where Dinsha Panday reported having seen them in amplexus a week ago. A small pool in the course of the rocky stream held several masses of eggs attached to the bottom or sides, all a few inches below water. One or two frogs sat inside the pool and appeared to be associated with the eggs. There is some variation in the calls, but the commonest starts with a guttural croak (not unlike the call of *Rana tigrina* caught by a snake) followed by a series of *tuk-tuk-tuks*. They call both by day and night, and are quite active during the day.'—Eds.]

38. EXTENSION OF RANGE OF THE FROG *UPERODON GLOBULOSUM* GUNTH.

On June 13, 1954, H.A. visited the Kanheri Caves (ca. 1,300 ft.) near Borivli, Salsette Island, Bombay. At the entrance just outside the caves, facing west is a line of rock cisterns. In the first, which contained about 9 in. of water, were two or three large specimens of *Rana tigrina*, a few *R. breviceps* and a number of toadlike, inflated frogs floating sluggishly, flat on their bellies in the corners. One specimen was taken for identification, and on the following day it was discovered that J.C.D. had brought in the identical specimens from the same place, having obtained them an hour or two before or after H.A.!

On the night of June 16, we visited the place together and found the cistern overflowing and only four of these frogs present. They were sluggish in their movements and not easily persuaded to move either on water or on land. Though this frog can jump a couple of inches it normally walks stretching its forelegs forwards, well beyond the head. It was also impossible to turn them on their backs for the shortest moment, as with the use of their limbs, they would right themselves instantaneously.

The following observations were made on a male specimen kept alive: When placed on loose earth it sits quietly for a while, then commences to dig with its hindfeet and lowers its hind quarters into the earth with no movement visible on the surface. In a few spurts it is completely underground, the eyes disappearing last.

It refused to eat earthworms, but devoured white ants when they were immediately under its mouth. They were also flicked off the sides of its face with its tongue. White ants crawling over its face were brushed off with the foreleg. A small frog, *Microhyla ornata*, was placed

in the same cage, but remained completely ignored even when quite under it.

The colour of the upper surface is leaden grey, with a brownish tinge. It has a few tiny spots on the fore and hind legs and also along the sides of the belly. These spots look like minute pimples and may be glandular. The underparts are pale colored with tinges of yellow. The skin is perfectly smooth except near the vent, where the females, which are considerably larger than the males, have numerous pustules which may be secondary sexual characters. The male has a dark chin. The gonads of the males dissected were enlarged, while the ovaries of the females were spent.

The pupil is round (*vide* Parker, Monograph of the Microhylidae, p. 75, 1934) and not vertical as stated in the Fauna, 1890. The tiny nostrils often quiver.

On June 13, we took between us 5 ♂♂s and 2 ♀♀s while the four individuals of June 16 were all males as determined by their dark chins. On June 19 only two of these were present in the cistern as also a large number of tadpoles swimming freely near the surface. In the adjoining cistern were more *Uperodon* tadpoles, some with fore and hind legs. Tadpoles of *Rana breviceps* were found in the same cistern but they kept to the vertical stone walls of the cistern down to a depth of about 12 in. The *Uperodon* tadpoles were relatively small in size and olive brown above with a pale tail striped longitudinally with dark blotchy lines. The sides and underparts were white, speckled with dark except in the centre of the belly which was pure white. A more detailed description of these tadpoles is being prepared and will be published separately.

By a strange coincidence, Shamoan Abdulali also obtained *Uperodon* tadpoles in a rain water pool at Thana, sea-level, Salsette, Bombay. The pool, about 18 in. deep, was shaded by a large tree at one end and held a lot of algae. Tadpoles of *Microhyla ornata* were noted in this pool, but they appeared to keep to the shallower and clearer portions only. The pool dried up after a few days and all the tadpoles presumably perished. Subsequent to this no more *Uperodon* adults or tadpoles were found in spite of continued search in the surrounding area, and it is strange that three persons should independently have found this hitherto rare species within the Bombay area practically all within the same short period. The previous records are from Russelkonda, Ganjam District, Andhra, Bengal and Berar whence adults were taken.

S. D. Mukerji (*JASB*, xxvii, 1931, pp. 97-100) records a specimen 47 mm. in length obtained in Calcutta. He refers to slimy secretion appearing on the body especially the dorsum when the animal was subjected to open air and light for a considerable length of time. His specimen, however, refused to take any of the ants and termites offered to it and died after 390 days of fasting.

Thurston, Superintendent of Government Central Museum, Madras (Catalogue of Batrachia, Salientia and Apoda of South India, 1888, p. 43) records that the specimen from Russelkonda had its stomach enormously distended by a mass of winged white ants.

Dr. J. L. Bhaduri, who kindly confirmed the identity of this species, obtained specimens of the frog from termite mounds in Bengal and

has already recorded (*JBNHS*, Vol. 45, pp. 251-254) some of the habits noted above.

The measurements of five of the specimens taken by us are as follows:—

Sex ...	...	...	♂	♂	♂	♀	♀
Tip of snout to vent	...	...	64	64	65	71.5	84 mm.
Breadth of head...	...	...	17.5	17	17	18.5	21
Eye ..	...	...	4	4	4.5	4.5	5
Upper eyelid ...	...	...	2.5	2.5	2.7	3.7	3
Inter orbital width	...	...	8	8.5	8	10	10.5
Inter metatarsal tubercle ...	...	...	7.1	7	7	9	9.5
Outer metatarsal tubercle ...	...	...	3	3.5	3.5	4	4.7
Tibia	...	...	20.5	20	20.5	25.5	25.5

BOMBAY NATURAL HISTORY SOCIETY,

114, APOLLO STREET,

BOMBAY,

September 25, 1954.

HUMAYUN ABDULALI

J. C. DANIEL

39. FOOD OF THE BULL-FROG (*RANA TIGIRINA*)

Mr. T. Gay's note in Vol. 52 (1): 212 on the food of the bull-frog reminds me of a similar murderous onslaught, as he puts it.

I had a pet squirrel which was not then fully grown. I had just put her down on the ground and let her follow me when from behind the row of flower pots a frog leaped out and was on her in a flash. The squirrel let out a frightened squeak and struggled to free herself but the marauder's grip was tough. In a panic I took up three or four stones and hit the frog hard, but he was in no mood to let go. Fortunately I spied a stick nearby, took it up and frantically beat the frog with it till he let go his arms and jumped back behind the flower pots. I took up the squirrel which lay limp in my cupped palm with her heart throbbing fast. She recovered within an hour and I was glad to note that there was neither a broken limb nor a single bruise on her person.

SUNNY VIEW,

SAHARANPUR,

July 31, 1954.

(MRS.) ARUNA BANERJI

40. DISTRIBUTION AND HABITS OF THE BATRACHIAN, *ICHTHYOPHIS GLUTINOSUS* LINN.

In view of the paucity of records of this curious worm-like batrachian in India, it may be worthwhile noting that in the forenoon of 23rd October, 1953, I saw one on a path to one of the 'points' on the Kanara side of the Gersoppa Falls in south Bombay State. The soil was hard laterite and the animal progressed by a series of ripples reminiscent of a millipede rather than a snake or eel. When put in a box its sticky surface enabled it to climb